

### **REMARKS**

In the Office Action, the Examiner has rejected claims 16-18, 20-25 and 29 under 35 USC 103 as being unpatentable over Galant in view of Makivic. The Examiner states that Galant teaches steps of receiving a collection of price data from a data source with reference to column 1, line 55 through column 2, line 55, and processing the price data to generate volatility-adjusted relative price data with reference to column 2, lines 40-67, column 17, line 60 through column 18 as well as column 19 through column 20, line 40.

In this regard, the prior art of Galant does not process price data to generate volatility-adjusted relative price data as set forth in claim 16 according to the present invention, but instead with reference to column 17 and the description of Figure 24 in Galant, relates to calculations associated with hedging opportunities. As set forth in column 17 for example, a Generic Rate Lock window 700 is analyzed with reference to several hedging options wherein the system calculates the hedge costs for various rate-lock periods. The system calculates the hedge ratio and the interest rate-risk which are used to measure a relative volatility of the future bond offering to be hedged versus the volatility of a hedged Treasury, wherein the hedge ratio allows for matching of volatilities to provide information as to execution of an interest rate lock. Although this description refers to “volatilities”, the teachings of Galant do not relate to the present invention, which processes a collection of price data to generate volatility-adjusted relative price data.

As described in the present specification starting on page 9, with reference to value charts, instead of plotting price with respect to zero, the price is plotted with respect to a floating axis, such as in relation to a median moving average over a period of time in a given market. The present invention is directed at identifying relative overbought and oversold price levels, which the prior art of Galant does not relate to in any fashion. The use of a “volatility field” in Galant in no way relates to the volatility-adjusted relative price data as set forth in the method according to the present invention. As set forth in column 21, lines 35-40, Galant describes that the user must first enter values of known variables including the option adjusted spread associated with a debt instrument, the volatility and initial coupon values for a given security. The volatility value as referred to by Galant simply does not relate to the volatility-adjusted relative price data according to the present

invention. The mere reference to volatility in Galant simply is not relevant to the present invention which allows clear identification of relative overbought and oversold price levels as the method according to the invention allows.

As the Examiner has recognized, the prior art of Galant also does not teach in any way providing a generation of a plurality of price charts with at least one of the plurality of price charts including a volatility-adjusted relative price chart representing a plurality of volatility-adjusted relative price data plotted within dynamic volatility intervals. As explained above, the prior art of Galant does not generate volatility-adjusted relative price data as set forth in the method according to the present invention, and the additional prior of Makivic does not render the present invention obvious in combination therewith. The Examiner suggests that Makivic teaches a volatility-adjusted chart with reference to Figures 3-5 and disclosure in column 13, column 17, column 18, column 24, Table 4 and claims 48-52. In this regard, Makivic in no way teaches forming a volatility-adjusted relative price chart representing a plurality of volatility-adjusted relative price data plotted within dynamic volatility intervals as in the present invention. In the reference to sections of Makivic, there is described a Monte Carlo method used in financial calculations based on a risk-neutral valuation approach as described in the theoretical basis set forth in column 4 et seq. The Monte Carlo approach as described in column 5, line 27, relates to generating random paths relative to financial instruments and accumulating their payoffs for comparison. Again, the reference to volatility in Makivic does not relate to the provision of a plurality of volatility-adjusted relative price data according to the present invention. As described in column 17 of Makivic, computing implied volatility is provided by a referenced prior art model to obtain estimates of future volatility. The volatility modeling described in Makivic has no relationship to the use of volatility-adjusted price data according to the present invention. Nothing within Galant is relevant to generating a plurality of price charts or a price chart including a volatility-adjusted relative price chart representing a plurality of volatility-adjusted relative price data plotted within dynamic volatility intervals.

In accordance with the present invention, in the description of formation of value charts according to the invention the volatility-adjusted relative price chart is derived according to the formula described on pages 11 and 12, which the prior art of Galant and Makivic simply do not relate to. The correlation of this prior art to the present invention as suggested by the Examiner

seems to relate to discussion of a volatility in the prior art, but in both the prior of Galant and Makivic, volatility means something completely distinct from this reference according to the present invention, wherein relative price data is generated and volatility adjusted to allow the formation of price charts with the volatility-adjusted relative price data plotted within dynamic volatility intervals. It is therefore believed that claim 16 clearly distinguishes from the prior art, and the combination of Galant and Makivic simply do not relate to the present invention as claimed, and clearly do not render it obvious. It is therefore believed that the rejection based upon this prior art should be withdrawn, and the same is respectfully requested.

The Examiner has also attempted to correlate the prior art of Galant and Makivic to certain dependent claims, which are again believed to clearly distinguish from this combination of prior art. With reference to claim 18, the Examiner states that Galant shows the x and y axis, but claim 18 defines the invention as plotting y x data points as deviations of price above or below a floating axis for each unit of time on an x axis. The floating axis represents a price function with the y axis price units being defined in terms of a dynamic volatility interval function resulting in volatility-adjusted relative price data plotted with respect to the floating axis for each x axis time unit. The prior of Galant simply does not relate in any way to these further aspects of the invention as defined in claim 18.

The Examiner also references Galant relative to claim 23, which defines the further aspect of the invention that the volatility-adjusted relative price data within each dynamic volatility interval on the generated price chart is recorded only when a predetermined condition is met. The reference to Figure 2B of Galant in no way relates to such a feature, as Galant does not relate to providing volatility-adjusted relative price data or generating the defined price charts according to the present invention. Further, Figure 2B in no way suggests the feature of claim 23 nor would this make such a feature obvious. Claim 23 relates to the possible use of conditional price action profiles as further defined in claim 24. Nothing within the prior art relates to this aspect of the invention.

The Examiner has also referenced Galant as being relevant to dependent claims 25, 29 and 32 with reference to Figures 3-42, stating that Galant shows tabular and graphical formatted displays. As the deficiencies of Galant described above are still clearly apparent, these claims should also be in allowable form. Further, claim 32 references a further step of showing the price action profile on a display, the price action profile being defined in claim 19. Galant simply has no

relevance to this feature of the invention. Withdrawal of the rejection of these further dependent claims is also thought to be in order, and is hereby respectfully requested.

The Examiner has also rejected claims 26, 27, 28, 30, 31, 33, 34 and 35 under 35 USC 103, as being unpatentable over Galant and Makivic as applied to claims 16, 19 and 21, and further in view of Nesmith et al. In this regard, the Examiner states that both Galant and Makivic failed to teach information derived from processing and collection of price data for output is used for further analysis within other market analysis algorithms as defined in claim 26. The Examiner attempts to turn to the prior art of Nesmith to account for this noted deficiency, but the art of Nesmith not only does not relate to these further aspects of the present invention as defined in claim 26, but also does not account for the additional deficiencies of the prior art of Galant in view of Makivic as described above. In claim 26, the use of the information derived from processing the collection of price data for further analysis within other market analysis algorithms is in no way taught by Nesmith. The prior art of Nesmith relates to a real-time price study wherein order preferences for securities can be entered by a user to allow the user to specify a particular transaction based upon a particular price point. The system monitors real-time price fluctuations of a security, and notifies the user if a particular price point has been reached. This in no way relates to the present invention which enables the processing of a collection of price data to generate volatility-adjusted relative price data which is then used to generate a plurality of price charts as defined in claim 16. The further aspect of the invention in claim 26 wherein the collection of price data is used within other market analysis algorithms is similarly not taught nor made obvious by Nesmith.

The Examiner also notes that Galant and Makivic fail to teach using information derived from a volatility-adjusted relative price chart to apply to absolute price charts, as set forth in claim 27. Claim 27 of the present invention as clearly defines from the prior art, and Nesmith in no way relates to using information derived from a volatility-adjusted relative price chart to apply to an absolute price chart. Nesmith does not generate price charts including a volatility-adjusted relative price chart representing a plurality of volatility-adjusted relative price data plotted within dynamic volatility intervals, and thus cannot use such information to apply to absolute price charts as in claim 27.

The Examiner also noted that Galant and Makivic fail to teach combining the information derived from the volatility-adjusted relative price chart or price action profile with other market

indicator information as set forth in claims 28 and 31 of the present invention. Again, Nesmith in no way relates to the step of combining information derived from the volatility-adjusted relative price chart with other market indicator information in claim 28 as suggested by the Examiner. Nothing within Nesmith relates to generating volatility-adjusted relative price charts from which the information derived therefrom can be used with other market indicator information to allow the user to make investment choices. Further, in claim 31, the further step of combining information derived from the price action profile is clearly not taught by Nesmith. Nesmith in no way relates to generating a price action profile which is derived from the volatility-adjusted relative price chart as defined in claim 19.

The Examiner also notes that Galant and Makivic fail to teach anything regarding developing a plurality of price action profiles and using such information according to claims 30, 33-35. Nesmith does not relate to generating price action profiles derived from volatility-adjusted relative price charts as defined in claim 19, and similar to Galant and Makivic, such that these further dependent claims clearly distinguish from this combination of prior art. The price action profile as defined in claim 19 is not taught or made obvious by any of the prior art, and the subsequent further steps defined in these further dependent claims also clearly distinguish from the prior art. It is believed that all of the dependent claims are clearly in condition for allowance along with the independent claim on which they are based, and withdrawal of these rejections is respectfully requested.

It is believed that the claims as set forth clearly distinguish from the prior art as relied upon by the Examiner, as nothing within this prior art relates to the claimed steps of the invention as noted above. It is believed that the claims are in allowable form, and favourable action thereon is respectfully requested.

Respectfully submitted,  
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